

CASE STUDY



CALJAN CURVETRACK — ABUS, GERMANY



The inventory, assortment depth and deliverability have become crucial factors in a highly competitive market. The technology used in a state-of-the-art despatch plant must take these requirements into consideration, which is precisely why ABUS decided to ask BLUME ROLLEN GmbH from Radevormwald, Germany to engineer the new system for their despatch plant. The entire operation; assembly, gradual start-up, all material flow changes and a new EDP system, were implemented parallel to the daily work. Everything was completed, ready for hand-over, in August 2008.

Automation combined with Pick to Light

The system is able to handle cardboard boxes and plastic totes equally well. A barcode label is placed on each container, which is then assigned to an order. The stock management computer transfers the order data to the material flow computer and the containers move automatically to the appropriate stations, in which the ordered articles are. The *Pick To Light* system indicates which article and quantities are to be picked. This paperless process results in very few errors. Once the order has been processed, the container is transported to one of ten packing stations. Here the articles from the containers are packed into boxes ready for despatch, together with delivery documents and provided with a despatch label. The system can handle 1,500 articles per hour.

The containers must change direction as they move along the conveyor. The smallest item measures 125 X 175 mm and the weight can be between 1 and 32.5 kg. There may also be difficulties reading the barcode or the box may tilt as the weight of the contents is distributed unevenly. To avoid strain – and also due to the size and weight of the containers – belt curves from Caljan Rite-Hite are used.

Noiseless operation, quick belt-change

To ensure that the conveyor system works optimally at all times, belt curve conveyors from Caljan Rite Hite have been used. These conveyors are able to move even small materials rapidly through the curve whilst maintaining correct orientation and position. They are virtually noiseless and the belt provides exceptional grip, so that all the materials conveyed are handled safely. Additionally, the label is presented so that the barcode can be read. The Caljan CurveTrack curves installed are the newest development in this product range. The patented belt guidance system allows for a very fast belt change when needed, increasing the availability of the overall system to approx 98%. An availability of 99.5% is the target.

The plant has now been in operation for more than one year without significant problems. ABUS will continue to optimize linking further storage halls, reducing the error rate and hopefully having smaller stocks.

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Rudolf Becker, Operations Manager ABUS, Germany

»This job illustrates the good co-operation between the north German planning company, the general contractor BLUME ROLLEN and the component supplier.«

»Before entering a firm agreement with CALJAN Rite-Hite for curve belt conveyors, we asked for a test installation so that we could ascertain the way in which the curve operated in difficult situations. As people work close by the conveying equipment, noise levels are of great importance. We also attach particular significance to servicing. All test units worked very well, with a noise level of less than 65 dBA for each drive.

ABUS components form a crucial part of many of our customers' businesses. Our aim with the new logistic centre has been to serve customers faster – a goal which has been fully achieved. Today we can deliver key components within two days. We will continue to optimize our processes so that we will be able to offer 24 hour delivery service.

At present, the express parcel carrier is the bottleneck. Our "Pick by Light" system is already able to complete an incoming order, so that it is ready for despatch, packed in a cardboard box, in just two hours.

During the next year, additional storage halls will be integrated into the system and the software will be upgraded accordingly. By the end of 2010, we expect to have the whole concept implemented and ready for operation.«

ABUS

Today the name ABUS stands for security world-wide. The ABUS group has a solid foundation, beginning with production of padlocks in 1924 as August Bremicker & Sons, which has become abbreviated to ABUS. The company has three major areas of focus:

- Domestic security
- Commercial security
- Mobile security

Domestic security is the traditional domain of ABUS. In addition to mechanical devices, electronic systems are also used. Besides the traditional padlock, ABUS can provide window safety devices, video monitoring, door closing systems and alarm installations. ABUS can protect commercial and operational values effectively, covering a wide range of requirements. ABUS can also offer physical protection, from the central lock plant to the general main key plant. Many individual solutions for commercial security are supported electronically. A wide range of Mobile security products are offered, e.g. for use on bicycles and motorcycles – from locks over helmets to bags for safe transport of valuable items.

Also internationally ABUS has a long tradition. Sales and production are globally oriented with a strong European presence. Today 2,500 people world-wide work for ABUS, through own companies and partners.



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